
Canyon Creek Drainage

Fuels Assessment

Areas within the one mile of home sites:

The entire Canyon Creek drainage, from Wallace to beyond the community of Burke, is characterized as steep forested slopes climbing dramatically from Canyon Creek to surrounding ridges. The forests of these slopes are primarily Douglas-fir and associated species that are between 60 and 90 years old. Forest fuels on these sites are composed on herbaceous shrubs, some minor amount of grasses, and litter from the tree canopy. Timber harvesting has been conducted in various areas with road building activities accessing only a minor amount of the drainage. Slopes are steep, averaging around 60-70% in some areas. Fire fuel models 8 and 10 are common in this area. The areas that have been recently logged are represented by fire fuel model 11. The south and west facing ridge tops supporting ponderosa pine are characterized as fire fuel model 2.

Home sites in this drainage are all concentrated along the river bottom from Wallace to Burke in small community clusters. These homes capitalized on the flatter areas for building sites, however, the steep canyon walls climb immediately from these sites to the forest and the canyon walls. In many instances, forest trees overtop homes, obscuring them from view, even from only a few yards away.



Areas within 3 miles of the community center, but outside the one mile home zone:

There is no significant difference between the forest conditions surrounding the home sites of this drainage and the timber found along the ridge tops. For planning purposes, the differentiation between the two can be ignored in favor of considering the creation of defensible zones around the home sites and considering fire spread potential in the river drainage.



The upper end of the drainage (sections 1 & 12 and beyond) transitions from a mixed conifer forest to a mountain forest ecosystem dominated by subalpine fir, western red cedar, mountain hemlock, and wetter site shrubs. The duff layer in these forests is very thick. Fires are rare in these high elevation ecosystems, but when they do occur (about every 100-500 years) they can be very intense.

Power lines and access roads cut through the forest providing a connection between Idaho and Montana power grids in this area. Shrubs and small trees are growing under the power line right-of-way. Although it is not a problem at this time, the right-of-way must be kept cleared of vegetation that may interfere with the power lines causing a wildfire ignition. Trees along the edges of the right-of-way for a distance of 100 feet should be evaluated for potentially falling into the power lines as well. Although this component of the ecosystem is at a high elevation and at a low risk of rapid wildfire spread, it is a very important component of the Canyon Creek drainage fire assessment because this route is the only escape for residents of the community if access to Wallace is cut off. In the event that a fire ignites lower in the drainage, residents may be forced to flee the area through this escape route. Every effort should be made to guarantee that this area has a low probability of fire ignition.

Community Risk Assessment

Canyon Creek includes the communities of Burke, Mace, and Gem. State Highway 4 winds up the river bottom where homes, mining structures, and other buildings are located. There are approximately 103 structures located in this river bottom. Although all of these structures are along the Canyon Creek and the state highway, they are all at very high-risk to wildfire loss in the event of a wildfire in the region. Rural fire protection is provided by Fire District №1 with a fire station in Osburn. Wildland fire protection is provided by the Idaho Department of Lands in Cataldo.

The greatest risk for casualty loss in the Canyon Creek Drainage is a wildfire that starts in the vicinity of Wallace and then spreads up-canyon in the direction of Gem, Mace, and Burke. If this ignition is accompanied by northeast winds (which is the prevalent wind in late summer), the steep canyon walls may act to blow the heat, flames, and smoke of the fire up the river bottom. This “worst-case-scenario” would be difficult to access and fight. In fact, it would be a challenge to evacuate the residents of the area by exiting the drainage via the US Forest Service Road 7623 to the northeast of the drainage (into Montana).

If high winds from the northeast were not present at the time of ignition, then it is probable that the fire spread would be limited to upslope locations, with spotting across the drainage highly likely. Fire spread in the area could easily approach 500 feet per hour on the flat slopes, and over 5 miles per hour on the steeper slopes. It would not be difficult for an up-slope fire spread to torch-out and be carried in



the crowns of the trees if fuel moisture were below 8% and midslope flame speeds were above 5 miles per hour.



Homes in this river drainage are at risk to ignition in the event that a fire starts in the drainage. Only a few home sites in this area, near Wallace, have any defensible space surrounding them. Other home sites in the drainage are characterized by dense forest canopies that overtop roofs and overhang outbuildings. All of these home sites would benefit greatly from the creation of a home defensible

space surrounding personal property at a distance of 250 feet (horizontal).

In these zones, trees within 100 feet of homes should be removed. Trees above the home sites and beyond the 100 foot zone to 250 feet should be thinned so that crowns are not touching. All trees in the 250 foot zone should be pruned of all branches (living and dead) to a height of 15 feet. Brush taller than 3 feet tall should be slashed. The debris created from the selective thinning, pruning, and slashing should then be disposed of through chipping, pile burning, or broadcast burning when weather conditions warrant. Homeowners should consider creating a “fire line” 2 feet wide of mineral earth at the edge of the forest and the protection zone to further hamper potential wildfire spread from the forest to the home sites.

Access for fire fighting equipment should be evaluated in respect to bridges in this river drainage to determine the maximum weight the bridges will support. These ratings should be posted on the bridges and kept in a record book at the fire district №1 station. In addition, evacuation routes should be clearly marked in the event of a fire emergency. Further, these routes should be evaluated by a roads specialist from the county and the US Forest Service to insure that two-wheel-drive personal vehicles can use this route as a reliable escape route.

Additional forest fuel modifications for this drainage are addressed in the section on the Nine Mile Creek Drainage (located immediately to the west of this drainage).

